

ABSTRACT OF THE DISCLOSURE

A class-AB MOS output stage that provides higher gain and significantly lower distortion. The class-AB MOS output stage includes a PMOS output transistor and an NMOS output transistor coupled between positive and negative supply voltages such that the MOS output transistors operate in a common source mode, a first biased class-AB control circuit coupled between the output transistor gates, a first current source coupled between the gate of the PMOS output transistor and the positive supply, a second biased class-AB control circuit, and a second current source coupled between the second control circuit and the positive supply. The second class-AB control circuit is coupled between the second current source and a non-inverting input of the output stage. The gate of the NMOS output transistor is employed as the inverting input of the output stage, which further includes two differential amplifiers for controlling the first and second current sources. The class-AB MOS output stage has a fully symmetrical differential input-to-single-ended output circuit configuration, which allows corresponding sources of gain reduction and non-linearity to cancel out, thereby improving the performance of the output stage.

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